

Application No. 10/825,871
Amdt. Dated November 15, 2005
Reply to Office Action of October 17, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-5 (Canceled).

1 6. (Currently Amended): A method for providing uniform temperature gradients in a
2 semiconductor processor for substrate processing, comprising the steps of:
3 providing a continuous flow of air utilizing a flow switch wherein the flow switch
4 chooses between two discrete air flows[,,]: a first air flow to provide a temperature
5 change during processing and a second air flow to provide a temperature change during
6 process idle.

1 7. (Currently Amended): The method for providing uniform temperature gradients in
2 a semiconductor processor for substrate processing in Claim 5-6 further comprising the
3 steps of: regulating the flow of air utilizing a flow switch to provide cooling of the two
4 discrete air flows.

1 8. (Currently Amended): The method for providing uniform temperature gradients in
2 a semiconductor processor for substrate processing in Claim 5-6 further comprising the
3 steps of: predefining the temperature as a result of the chosen air flow.

1 9. (Currently Amended): A method for providing a continuous flow of air in a
2 semiconductor processor for substrate processing, comprising the steps of:
3 sensing selected temperature points of measurement; and
4 maintaining an air flow proportional to a range of temperatures at selected
5 temperature points; and;
6 maintaining a selected temperature during the time that the processor is
7 processing substrates and a-when substrate processing substrates-is idle.

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1 10. (Currently Amended): The method for providing uniform temperature gradients in
2 a semiconductor processor for substrate processing in Claim 8-9 further comprising the
3 steps of: maintaining a supply of heat comprising the air flow at a predefined
4 temperature.

1 11. (Currently Amended): The method for providing uniform temperature gradients in
2 a semiconductor processor for substrate processing in Claim 8-9 further comprising the
3 steps of: utilizing a heat exchanger to regulate the amount of heat provided to ~~the a~~
4 chamber surface of the semiconductor processor.

1 12. (Currently Amended): The method for providing uniform temperature gradients in
2 a semiconductor processor for substrate processing in Claim 9 further comprising the
3 steps of: utilizing one or more temperature sensors and a flow controller for allowing
4 upward and downward fluctuations in the temperature of ~~the a dome of the~~
5 semiconductor processor.

1 13. (Currently Amended): The method for providing uniform temperature gradients in
2 a semiconductor processor for substrate processing in Claim 9 further comprising the
3 steps of: utilizing one or more temperature sensors and a flow controller for allowing
4 upward and downward fluctuations in the heat provided to ~~the a dome of the~~
5 semiconductor processor.

6 14. (Currently Amended): The method for providing heat to a semiconductor
7 processor for substrate processing in Claim 8-9 further comprising the steps of:
8 maintaining a supply of air comprising the air flow at a predefined quantity of heat
9 provided to ~~the a dome of the semiconductor processor~~.

1 15. (New): A method for semiconductor processing, comprising the steps of:
2 providing a domed process chamber having a support, a process gas distributor,
3 and an exhaust; and

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4 continuously varying an air flow responsive to temperatures changes in the domed
5 process chamber, such that a dome temperature is stabilized in accordance with a preset
6 temperature during a semiconductor manufacturing process.

1 16. (New): The method of Claim 15, further comprising:
2 driving an antenna of a plasma reactor chamber by RF energy inductively coupled
3 inside the domed process chamber.

1 17. (New): The method of Claim 16, further comprising:
2 generating a low energy plasma by the antenna for etching metals, dielectrics and
3 semiconductor materials.

1 18. (New): The method of Claim 16 further comprising:
2 applying an auxiliary RF bias energy to a wafer support cathode to control a
3 cathode sheath voltage and the ion energy independent of a plasma density in the plasma
4 reactor chamber.

1 19. (New): The method of Claim 15 further comprising:
2 idling the semiconductor manufacturing process.